

Amendment

Reply to Office Action dated March 09, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously presented) A method for carrying out in continuous, under pseudo-isothermal conditions and in a predetermined reaction environment, a selected chemical reaction, comprising the steps of:

feeding a first flow of a heat exchange operating fluid at a respective predetermined inlet temperature in at least one tubular heat exchanger provided in said reaction environment, said fluid passing through said at least one tubular heat exchanger according to a respective inlet/outlet path, and

feeding into said at least one tubular heat exchanger and at one or more intermediate positions of said path, a second flow of operating fluid having a respective predetermined inlet temperature.

2. (Previously presented) A heat exchanger comprising:

a tubular element,

a chamber defined within said tubular element for being passed through by a first flow of a heat exchange operating fluid,

a fluid distributor duct, and

a fluid collector duct connected to said tubular element and in fluid communication with said chamber,

an additional distributor of a second flow of said operating fluid in fluid communication with said chamber, and

a feeding duct of said second flow of operating fluid in fluid communication with said additional distributor.

3. (Previously presented) The heat exchanger according to claim 2, wherein said additional distributor is supported within said tubular element and is provided with at least a hole

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in fluid communication with said chamber at a predetermined distance between said fluid distributor duct and said fluid collector duct.

4. (Previously presented) The heat exchanger according to claim 3, wherein said additional distributor is tubular shaped, closed at one end thereof and connected to said feeding duct at an opposite end thereof.

5. (Previously presented) The heat exchanger according to claim 4, wherein said feeding duct is supported within said fluid distributor duct or said fluid collector duct.

6. (Previously presented) The heat exchanger according to claim 3, wherein said additional distributor extends for substantially the entire length of said tubular exchanger.

7. (Previously presented) The heat exchanger according to claim 3, wherein said additional distributor is provided with a plurality of said holes arranged in rows at respective predetermined distances between said fluid distributor duct and said fluid collector duct.

8. (Previously presented) The heat exchanger according to claim 4, wherein the diameter of said additional distributor varies along its length.

9. (Previously presented) The heat exchange unit for pseudo-isothermal reactors, comprising at least one tubular heat exchanger according to claim 2.

10. (Currently amended) A pseudo-isothermal chemical reactor comprising a predetermined reaction environment catalytic bed and a heat exchange unit according to claim 9 provided therein.